



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,552	12/28/2005	Hitoshi Nagahama	1247-0541PUS1	8217
2292 7590 01/09/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER EVANS, GEOFFREY T	
			ART UNIT 2852	PAPER NUMBER
			NOTIFICATION DATE 01/09/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

DETAILED ACTION

Claim Objections

Claim 1 is objected to for minor typographical errors. The phrase, “a concavity sinking inward in a radial direction including a discharge hole, the discharge hole being located on downstream end wall portion in rotation direction of the concavity,” seems to omit two instances of the word, ‘a.’

Claim 1 is also objected to for an apparent error. The aforementioned phrase uses the word ‘downstream,’ when Applicant likely meant to recite ‘upstream.’ See figure 9 of the current Application.

Appropriate correction is required.

Examiner has interpreted the phrase as, “a concavity sinking inward in a radial direction including a discharge hole, the discharge hole being located on an ~~downstream~~ **upstream** end wall portion in a rotation direction of the concavity, wherein an opening area of the discharge hole is formed to be smaller than an area of the end wall portion,” with additions underlined and bolded, and deletions struck through, as Applicant likely intended.

Claim 2 is objected to because the phrase, “the container main body is provided with a discharge hole,” is not further limiting over claim 1.

Claim 8 is objected to because the phrase, "an image forming apparatus in which the developer container of claim 1 is detachably mounted," is not further limiting over claim 1.

Claim 9 is objected to for an obvious typographical error, specifically, that an instance of the word, 'a,' is missing from the phrase, "...on substantially middle portion..."

Appropriate correction is required.

Examiner has interpreted claim 9 as, "...on a substantially middle portion..." as Applicant likely intended.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagahama, et al. (JP pub 2004-347961; the following comments are made with respect to the English translation, mailed herewith).

Regarding claim 1, and claim 2-3 and 8 depending therefrom, Nagahama, et al. disclose a developer container **(30; see figure 1, and paragraph [0018])** comprising:

a cylindrical container main body **(31; see figure 1, and paragraph [0018])** for containing a developer for use in image formation **(see paragraph [0010])**, the

Art Unit: 2852

developer container being detachably mounted on an image forming apparatus, the container main body being rotated about an axis **(see paragraph [0018])** thereof by driving means provided in the image forming apparatus **(see paragraph [0101])** to supply the developer to the image forming apparatus **(see paragraph [0010])**,

the container main body having:

a concavity **(41)** sinking inward in a radial direction **(see figures 7 and 9; and paragraph [0030])** including a discharge hole **(43; see figures 7 and 9; and paragraph [0030])**, the discharge hole being located on ~~an downstream~~ upstream end wall portion in a rotation direction of the concavity **(see figures 7 and 9; regardless of the sense in which Applicant defines 'upstream' and 'downstream,' it is clear that the Nagahama reference discloses the same location of the discharge hole relative to the concavity)**, wherein an opening area of the discharge hole is formed to be smaller than an area of the end wall portion **(see figures 7 and 9)**,

conveying means **(all items 36 and 39)** in an inner circumferential portion of the container main body **(see figure 4, and paragraphs [0020] and [0024])**, for conveying the developer in the axial direction when the container main body is rotated about the axis **(see paragraphs [0020] and [0024])**, the conveying means having a plurality of conveying portions **(each of items 36 or 39)**, each conveying portion being disconnected from the others **(see figure 4; and paragraphs [0020] and [0024])**, extending in an extending direction from one end portion to the other end portion in the

Art Unit: 2852

axial direction as it is directed to a downstream side in a rotation direction (**see figure 4; and paragraphs [0020] and [0024]**),

the conveying portions being formed at intervals in a circumferential direction thereof and the axial direction (**see figure 4; and paragraphs [0020] and [0024]**), of which adjacent two conveying portions in the axial direction being arranged in such a manner that an end portion on a downstream side in the rotation direction of one conveying portion and an end portion on an upstream side in the rotation direction of the other conveying portion adjoin each other in the axial direction (**see figure 4; and paragraphs [0020] and [0024]**), wherein a length in the extending direction of each conveying portion is not less than $1/16$ and not more than $3/8$ of an inner circumferential length of the container main body (**see paragraph [0026]**).

Regarding claim 2, Nagahama, et al. disclose the developer container of claim 1, wherein the container main body is provided with a discharge hole (**43**) for discharging the developer (**see figures 7 and 9; and paragraph [0030]**), and

the conveying means conveys the developer in the axial direction of the container main body toward the discharge hole while oscillating the developer by rotating the container main body (**see paragraphs [0020] and [0024]**).

Regarding claim 3, Nagahama, et al. disclose the developer container of claim 1, wherein the conveying portions are formed so as to meander in a substantially S-shape (**see figures 1, 2, and 4; and paragraph [0083]**).

Art Unit: 2852

Regarding claim 8, Nagahama, et al. disclose an image forming apparatus in which the developer container of claim 1 is detachably mounted (**see paragraphs [0001] and [0010]**).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagahama, et al. (JP pub 2004-347961; the following comments are made with respect to the English translation, mailed herewith).

See the foregoing rejection of claim 1 for those limitations recited therein.

Regarding claim 4, and claims 5-7 and 9 depending therefrom, Nagahama, et al. disclose the developer container of claim 1, wherein the container main body is provided with a discharge hole for discharging the developer (**43; see figures 7 and 9; and paragraph [0030]**).

Nagahama does not disclose that the conveying portions are formed so that the conveying mount of the developer by a conveying portion formed in a close portion to the discharge hole becomes larger than the conveying amount of the developer by a conveying portion formed in a distant portion from the discharge hole.

It would have been obvious to one of ordinary skill in this art at the time the invention was made, to modify the invention of Nagahama, et al. such that the

Art Unit: 2852

conveying portions are formed so that the conveying amount of the developer by a conveying portion formed in a close portion to the discharge hole becomes larger than the conveying amount of the developer by a conveying portion formed in a distant portion from the discharge hole, in order to avoid the buildup of developer near the discharge hole, a problem discussed by Nagahama, et al. **(see paragraphs [0025] and [0026])**.

Regarding claim 5, Nagahama, et al. do not disclose the developer container of claim 4, wherein the conveying portions are formed so that the conveying portions formed in a close portion to the discharge hole proceed in the axial direction in the longer distance as proceeding in the circumferential direction in comparison with the conveying portion formed in the distant portion from the discharge hole.

It would have been obvious to one of ordinary skill in this art at the time the invention was made, to modify the invention of Nagahama, et al. such that the conveying portions are formed so that the conveying portions formed in a close portion to the discharge hole proceed in the axial direction in the longer distance as proceeding in the circumferential direction in comparison with the conveying portion formed in the distant portion from the discharge hole, so that the conveying amount of the developer by a conveying portion formed in a close portion to the discharge hole becomes larger than the conveying amount of the developer by a conveying portion formed in a distant portion from the discharge hole as discussed by Nagahama, et al. **(see paragraphs [0025]-[0026])**, in order to avoid the buildup of developer near the discharge hole, a problem discussed by Nagahama, et al. **(see paragraphs [0025] and [0026])**.

Art Unit: 2852

Regarding claim 6, Nagahama, et al. do not disclose the developer container of claim 4, wherein the conveying portions are formed so that the conveying portion formed in the close portion to the discharge hole have a larger size in an extending direction in comparison with the conveying portion formed in the distant portion from the discharge hole.

It would have been obvious to one of ordinary skill in this art at the time the invention was made, to modify the invention of Nagahama, et al. such that the conveying portions are formed so that the conveying portion formed in the close portion to the discharge hole have a larger size in an extending direction in comparison with the conveying portion formed in the distant portion from the discharge hole, so that the conveying amount of the developer by a conveying portion formed in a close portion to the discharge hole becomes larger than the conveying amount of the developer by a conveying portion formed in a distant portion from the discharge hole as discussed by Nagahama, et al. **(see paragraphs [0025]-[0026])**, in order to avoid the buildup of developer near the discharge hole, a problem discussed by Nagahama, et al. **(see paragraphs [0025] and [0026])**.

Regarding claim 7, Nagahama, et al. do not disclose the developer container of claim 4, wherein the conveying portions are formed so as to protrude inward in a radial direction, and the conveying portion formed in the close portion to the discharge hole is formed so as to have a larger protruding amount inward in the radial direction in comparison with the conveying portion formed in the distant portion from the discharge hole.

Art Unit: 2852

It would have been obvious to one of ordinary skill in this art at the time the invention was made, to modify the invention of Nagahama, et al. such that the conveying portions are formed so as to protrude inward in a radial direction, and the conveying portion formed in the close portion to the discharge hole is formed so as to have a larger protruding amount inward in the radial direction in comparison with the conveying portion formed in the distant portion from the discharge hole, so that the conveying amount of the developer by a conveying portion formed in a close portion to the discharge hole becomes larger than the conveying amount of the developer by a conveying portion formed in a distant portion from the discharge hole as discussed by Nagahama, et al. **(see paragraphs [0025]-[0026])**, in order to avoid the buildup of developer near the discharge hole, a problem discussed by Nagahama, et al. **(see paragraphs [0025] and [0026])**.

Regarding claim 9, Nagahama, et al. further disclose the developer container of claim 4, wherein the discharge hole is provided on a substantially middle portion in the axial portion of the container main body **(see figure 1)**.

Response to Arguments

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2852

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GEOFFREY T. EVANS whose telephone number is (571)272-2369. The examiner can normally be reached on 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on (571) 272 2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David M Gray/
Supervisory Patent Examiner,
Art Unit 2852

GTE